REMARKS

Applicant has carefully considered the Examiner's Office Action and has amended the claims responsively to define the invention in clearer form and to distinguish patentably from the prior art.

Applicant has, moreover, amended the claims also to respond to the Examiner's objections under 35 U.S.C. 112, second paragraph.

Thus, applicant has amended the claims so as to avoid crossing embodiments to which the Examiner has objected, and to provide for clarification and definiteness.

The Examiner has objected to the amended drawings of Figures 5 to 7 on the grounds that the application, as originally filed, does not provide support for these Figures 5 to 7.

It is submitted, however, that claims 8 and 9 as they were originally filed, provide support for the amended drawings of Figures 5-7.

Figures 5-7 show the subject matter of claims 8 and 9, as originally filed, in its simplest form, and as such these Figures 5-7 do not introduce new matter.

Thus, Figures 5 and 6 show polygonal shapes in simplest form, and nothing more.

Figure 7 shows the knife-like elevations recited in claim 9, in the most simplest form. Accordingly, Figure 7 does not introduce new matter.

It is submitted that claims 8 and 9 are a part of the original disclosure as it was filed. Claims 8 and 9, therefore, are a part of the disclosure.

The specification has been also amended to include the subject matter of claim 8 for the polygonal shape shown in Figures 5 and 6, and also claim 9 for the knife-like elevations

shown in Figure 7. These amendments to the specification do not introduce new matter.

It is submitted, therefore, that the claims 8 and 9 provide the necessary support for the amended figures which the Examiner has required.

The Examiner has not rejected claims 9, 11, 12, and 15-17 over the prior art.

With respect to the remaining claims in the application, applicant notes that the prior art discloses that a piston head for a dashpot or shock absorber has a central bore and is pushed onto a bolt, whether the piston head is of a single part or a multiple number of parts.

This bolt has the same diameter throughout its length, and this diameter is smaller than the diameter of the piston rod. This provides an abutting surface at the transition between piston rod and bolt.

The lower end of the cylindrically-shaped bolt is provided with fastening means. The piston head lies always at the abutting surface, whether directly or indirectly. This abutting surface is established by the section of the piston rod and the bolt.

Whereas covering disks are to be found on both sides of the piston head, and they function as check valves, and the applied pressure is to be individually adjustable, there results in this prior art arrangement a very complex construction as illustrated, for example, in the reference patent to De Koning (2,888,107).

In contrast to the prior art described above, applicant's invention has the object of providing a simpler solution in which the bolt is fixed to the collar connected to the bolt. The collar 22, 28, 29 or 31, is centrally located.

With this construction in applicant's invention, abutting surfaces are provided on both sides of the collar, for each half of the piston head.

As a result, the piston head can no longer be pushed on one side of the piston, in applicant's arrangement. Instead, the two halves of the piston head must each be pushed from one side onto the bolt, prior to assembly. It is only after that, that the bolt and the piston rod can be secured.

Through the preceding construction of applicant's invention, it is possible to obtain different tensions of the individual spring disks or spring disk packets of the halves of the piston head.

Accordingly, applicant's solution is not anticipated by a skilled person working in the art, in any manner whatsoever.

Thus, the reference patent to May (5,259,294) discloses a piston formed from an outer casing part and an inner part located within the casing part. An upper surface and a lower surface of the piston each have an annular shoulder which defines annular chambers extending radially inward from the shoulders. The piston is penetrated in a substantially axial direction by liquid-carrying channels which end in two flat surfaces of the piston. Each of these liquid-carrying channels has an inlet opening which lies radially outside the annular shoulder, and an outlet opening which lies radially inside the annular shoulder. A cylindrical passage and an annular stop are located in the center of the piston. Both the cylindrical passage and the annular stop are used in the assembly of the piston on a piston rod. The two parts of the piston are radially symmetrical, but they are formed with outer and inner parts differing from each other.

It is submitted that the amended claims do not at all read on this reference patent to May.

The reference patent to De Koning (2,888,107) discloses a shock absorber with an outer cylinder having a bottom to which an eye is connected for connecting in turn the shock absorber to a part of the motor vehicle. A housing for a relief valve is mounted near that bottom and is connected to a working cylinder

and a cover for the outer cylinder. The cover is shaped as a nut, and a piston rod passes through the nut. The piston rod passes through the nut, and one end of this piston rod is connected to a piston which is provided with valves. The other end of the piston rod is connected to a sleeve which has an eye secured to it. An annular valve controls narrow longitudinal channels in the piston and is urged onto a seat by a spring. During an inward stroke, one chamber is filled with oil and remains filled. This results from a valve and the flowing of oil from another chamber through a channel. Oil under pressure in the latter chamber during the inward stroke can escape from the chamber through the relief valve into an annular space.

It is submitted that the amended claims will not read on the reference patent to May even when combined with the patent to De Koning.

The reference patent to Deferme (6,371,264) discloses a rebound valve in a shock absorber which flexes a disk required for allowing the passage of fluid from one side of a piston to the opposite side thereof, during a stroke of the piston. Fluid flow through the piston is increased when the fluid pressure is exerted upon the rebound valve after exceeding a specified level. The arrangement is intended to protect the shock absorber and the suspension system into which the shock absorber is mounted.

It is submitted that even when the reference patent to Deferme is combined with the reference patent to May, the amended claims will not read on this combination of references.

Unlike the prior art, applicant's invention provides a piston head with axial channels each of which is openable and closeable by a one-way valve in form of a cup spring. The cup springs are independently adjustable in tension for both compression and suction phases. The cup springs rest against the piston head and are aligned therewith.

In applicant's invention, furthermore, the tensions are adjustable by deforming the piston head resiliently or plasticly against a contact surface of the piston head for varying hydraulic impedances of the compression and suction phases. The piston has a characteristic curve adjustable in both compression and suction phases.

According to applicant's invention, furthermore, the piston head has a central bolt with a continuous collar, and two piston halves rest axially against the collar.

Applicant's invention provides that the bolt is fixed to the collar, and this collar has two faces abutted by the two piston halves.

The piston halves of applicant's invention can be pushed over the bolt from opposite ends of the bolt in mounting the piston halves on the bolt, so that the bolt can be fastened only thereafter to the piston rod.

It is submitted that the novel features of applicant's invention are recited in the amended claims.

As a result, the amended claims do not read on the prior art references when they are considered either individually or in combination. None of the references disclose the structure and features of applicant's arrangement.

Even when the references are combined, they cannot arrive at applicant's invention.

Applicant provides for a new and marked improvement over the prior art.

Since the claims define clearly the differences between applicant's invention and the prior art, it is believed that the claims should be found allowable.

The Examiner's attention is respectfully directed to the Court decision in the case of In re Bisley (94 U.S.P.Q. 80, 86), in which the Court ruled that patentability is gauged not only by the extent or simplicity of physical changes, but also by the perception of the necessity or desirability of making such

changes to produce a new result. When viewed after disclosure, the changes may seem simple and such as should have been obvious to those in the field. However, this does not necessarily negate invention or patentability. The conception of a new and useful improvement must be considered along with the actual means of achieving it in determining the presence or absence of invention. The discovery of a problem calling for an improvement is often a very essential element in an invention correcting such a problem. Though the problem, once realized, may be solved by use of old and known elements, this does not necessarily negate patentability.

Furthermore, in the case of ex parte Chicago Rawhide Manufacturing Company (226 U.S.P.Q. 438), the Court decided that the mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal, is not by itself, sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device. The Examiner has not presented any evidence to support the conclusion that a worker in this art would have had any motivation to make the necessary changes in the reference device to render the here-claimed device unpatentable.

In the case of The Standard Oil Company vs. American Cyanamid Company (227 U.S.P.Q. 293), the Court ruled that the issue of obviousness is determined entirely with reference to a hypothetical person having ordinary skill in the art. It is only that hypothetical person who is presumed to be aware of all the pertinent prior art. The actual inventor's skill is irrelevant to the inquiry, and this is for a very important reason. The statutory emphasis is on a person of ordinary skill. Inventor's, as a class, according to the concepts underlying the constitution and the statutes that have created the patent system, possess something that sets them apart from the workers

of ordinary skill, and one should not go about determining obviousness under 35 U.S.C. 103 by inquiring into what patentees (i.e., inventors) would have known or would likely have done, faced with the revelation of references. A person of ordinary skill in the art is also presumed to be one who thinks along the line of conventional wisdom in the art and is not one who undertakes to innovate, whether by patient, and often expensive systematic research or by extraordinary insight; it makes no difference which.

With respect to combining the references, the Court decided in the case of Uniroyal Inc. versus Rudkin-Wiley Corporation (5 U.S.P.Q.2d 1434), that when prior art references require a selective combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself. Something in the prior art as a whole must suggest the desirability, and thus the obviousness of making the combination.

The preceding decision is reinforced by In re Dow Chemical Company (5 U.S.P.Q.2d 1529), in which the court decided that most technological advance is the fruit of methodical persistent investigation, as is recognized in 35 U.S.C. §103. The consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have reasonable likelihood of success, viewed in the light of the prior art. Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure.

Furthermore, in the case of United Merchants and Manufacturers Incorporated versus Ladd (139 U.S.P.Q. 199), the District Court ruled that although from simplicity of device and with advantage of hindsight, one might offhandedly be of opinion that anyone should have been able to make invention after studying prior art, claims are allowed since none of the

reference discloses or suggests the concept which is the crux of the invention.

Also, in the case of Panduit Corporation vs. Burndy Corporation (180 U.S.P.Q. 498) the District Court ruled that inquiry into patentability must be directed towards subject matter as a whole and not to elements of combination and their individual novelty; combination which results in a more facile, economical, or efficient unit, or which provides results unachieved by prior art structures, cannot be anticipated piecemeal by showing that elements are individually old.

Finally, in the case of Meng and Driessen (181 U.S.P.Q. 94), the Court ruled that progress in crowded arts, usually made in small increments, is as important as it is in arts at the pioneer stage; constitution envisages and seeks progress in useful "arts," not just in those more esoteric or scientific.

In view of the amendments to the claims as well as the specification, therefore, and in view of the preceding remarks, it is respectfully requested that the claims in the application be allowed and the case be passed to issue.

Respectfully submitted,

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